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ABSTRACT

This study investigated Taiwanese English as a Foreign Language (EFL) students knowledge of English collocations and the collocational errors they made. The subjects were 60 students from a college in Taiwan. The research instrument was a self-designed Simple Completion Test that measured students knowledge of four types of lexical collocations: free combinations, restricted collocations, figurative idioms, and pure idioms. The results indicated that, for these students, free combinations created the least amount of difficulty, whereas pure idioms were the most challenging. Additionally, students performed about equally well on restricted collocations and figurative idioms. In general, the students deviant answers demonstrated their insufficient knowledge of English collocations. It is concluded that EFL learners errors in collocations can be attributed to negative first language transfer. Test items are appended. (Contains 26 references.) (Author/SM)

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Knowledge of English Collocations: An Analysis of Taiwanese EFL Learners

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This research investigated Taiwanese EFL students' knowledge of English collocations and the collocational errors they made. The subjects were 60 students from a college in Taiwan. The research instrument was a self-designed Simple Completion Test that measured the subjects' knowledge of four types of lexical collocations: free combinations, restricted collocations, figurative idioms, and pure idioms. The results indicated that, for the subjects, free combinations created the least amount of difficulty, whereas pure idioms were the most challenging. Additionally, they performed about equally well on restricted collocations and figurative idioms. In general, the subjects' deviant answers demonstrated their insufficient knowledge of English collocations. It is concluded that EFL learners' errors in collocations can be attributed to negative L1 transfer.

INTRODUCTION

Research in the field of TESL/TEFL (teaching English as a second/foreign language) has recognized collocational knowledge as a crucial part of phraseological competence in English (Fontenelle, 1994; Herbst, 1996; Lennon, 1996; Moon, 1992). The syntagmatic relations of a lexical item help define its semantic range and the context where it appears. Awareness of the restrictions of lexical co-occurrence can facilitate ESL/EFL learners' ability to encode language (Nattinger, 1989; Seal, 1991). It also enables them to produce sentences that are grammatically and semantically acceptable. They thus can conform to the expectations of academic writing or speech communication (Bahns, 1993; Bahns & Eldaw, 1993; Farghal & Obiedat, 1995; Granger, 1998).

Research on ESL/EFL learners' vocabulary development has mainly focused on the knowledge and production of individual lexical items. In contrast, researchers have devoted scant attention to knowledge of collocations. As Bahns and Eldaw indicated in an empirical study (1993), EFL students did not acquire collocational knowledge while acquiring vocabulary. Instead, their collocational proficiency tended to lag far behind their vocabulary competence. Among the small number of studies on learners' performance in English collocations, the majority have observed the difficulty of learners whose native languages are similar to English. Investigations of the collocational knowledge of learners who have a very different linguistic system—for example, Chinese or Japanese—remain scarce. Research on the difficulty that learners from different L1 backgrounds encounter in acquiring English collocations would prove valuable and would enable teachers to identify effective ways of promoting phraseological competence in their learners.

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LITERATURE REVIEW

To obtain a holistic picture of the issues related to the acquisition of English collocations by ESL/EFL learners, this section reviews the literature on the topics of (a) the categorization of collocations, (b) factors influencing ESL/EFL learners' performance in collocations, and (c) learners' strategies in dealing with collocations.

Categorization of Collocations

Some sequences of lexemes can co-occur due to an individual speaker's choice of words, but others appear in a predictable way. When the co-occurrence of lexical items has a certain degree of mutual predictability, the sequence of these items is considered a collocation (Cruse, 1991; Jackson, 1989). As Crystal (1995) has pointed out, the collocation of particular lexemes is not necessarily based on the subject's knowledge of the world. Rather, what is required for one item to attract another is, to some extent, dependent on the intuitive understanding of a native speaker. The predictability of certain word combinations can be weak; for instance, *dark* is an item with a diverse range of collocates. In contrast, an item such as *rancid* tends to have strong predictability because it can collocate with only two or three items. Researchers generally agree that different types of collocations should be placed on a continuum (Fontenelle, 1994; Herbst, 1996; Howarth, 1998a; Nattinger & DeCarrico, 1992; Palmer, 1991). They indicate that, simply by relying on the meanings of collocational constituent elements, it is hard to draw a clear distinction between collocations that are either predictable or not.

As far as the dividing points on the continuum are concerned, researchers have yet to reach an agreement. Nonetheless, the criteria for categorizing different types of word combinations basically include semantic transparency, degree of substitutability, and degree of productivity (Carter, 1987; Howarth, 1998b; Nattinger & DeCarrico, 1992). On the one end of the collocational continuum are free combinations with the highest degree of productivity, semantic transparency, and substitutability of items for their constituent elements. On the other end are idioms that are the least productive, the most opaque in semantics, and the most frozen in terms of substitutability of elements. Between these two extremes are different types of restricted collocations.

At present, we still lack a clear, non-controversial and all-embracing definition of collocation (Fontenelle, 1994). Consequently, researchers tend to use different terms and scopes to describe the syntagmatic relationships between lexical items (Granger, 1998; Moon, 1992). The current study adopts Howarth's (1998b) categorization model of lexical collocations because the model provides a thorough explanation of the classification criteria and easy-to-follow examples. In the model, the collocational continuum contains four categories of collocations: (a) free combinations, (b) restricted collocations, (c) figurative idioms, and (d) pure idioms. A free combination derives its meaning from

composing the literal meaning of individual elements, and its constituents are freely substitutable. A typical example provided by Howarth is *blow a trumpet*. A restricted collocation is more limited in the selection of compositional elements and usually has one component that is used in a specialized context, e.g., *blow a fuse*. For idioms that are semantically opaque or highly frozen, Howarth further divides them into figurative and pure idioms. While a figurative idiom has a metaphorical meaning as a whole that can somehow be derived from its literal interpretation, a pure idiom has a unitary meaning that is totally unpredictable from the meaning of its components. The example Howarth gives for the two types are *blow your own trumpet* and *blow the gaff*, respectively.

Factors Influencing Performance in Collocation

Recent empirical studies have identified several factors that may influence learners' performance in producing collocations. These factors include semantic fields, meaning boundaries, and collocational restrictions. The semantic field of a lexicon is determined by its conceptual field. Examples of conceptual fields include color, kinship and marital relations. (Allan, 2001). Biskup (1992) examined Polish and German EFL learners' performance in English collocations. He concluded that the wider the semantic field of a given lexical item, the more L1 interference errors it might trigger. For example, a number of subjects provided **lead a bookshop* for the target collocation *run a bookshop*, which was clearly an instance of L1 interference. In the same vein, the more synonyms an item had, the more difficulties learners encountered in producing a restricted collocation. Lennon (1996) also pointed out the reasons accounting for learners' erroneous use of high frequency verbs such as *put, go,* and *take*. The main reason lay in these verbs' rich polysemy and syntactic complexity. As they formed phrases with prepositions, these verbs created collocational restrictions that required special attention to their collocational environments. These lexical properties surely created different degrees of difficulty for learners.

The second factor concerns the influence of learners' native language. Because of the commonality of some human situations, different languages have parallel fixed expressions that are syntactically and semantically similar (Moon, 1992; Teliya, Bragina, Oparina, & Sandomirskaya, 1998). Due to cultural specificity, however, certain elements embedded in these expressions differ across languages. For example, English and Russian have a restricted collocation to express the process of forming a person's character. The English collocation is to mold someone's character, whereas the Russian expression vuikovuivat' kharakter means, literally, to forge someone's character. This Russian collocation is associated with a blacksmith hammering at a metal object to give it firmness and hardness. Though the English expression is also connected with a firm object, it emphasizes the idea of giving shape to an originally shapeless mass (Teliya et al., 1998). These similar but distinct expressions may cause a negative transfer from learners' L1 (Granger, 1998). L1 influence is most prevalent when

learners perform translation tasks. Lacking collocational knowledge, learners rely heavily on the L1 as the only resource and thus do better in those collocations that have L1 equivalents than those that do not (Bahns, 1993; Bahns & Eldaw, 1993; Farghal & Obiedat, 1995).

The third factor has to do with individual learners' collocational competence. Granger (1998) and Howarth (1998a), by comparing the writing corpora of ESL/EFL learners and native English speakers, both reported that these learners generally demonstrated deficient knowledge of English collocations. Compared with their native-speaker counterparts, the ESL/EFL learners produced a lower percentage of conventional collocations but a higher percentage of deviant combinations. These learners tended to have a weak sense of the salience of collocational patterns. Other researchers such as Bahns and Eldaw (1993) and Farghal and Obiedat (1995) reported likewise. They found that L2 learners had a big gap between their receptive and productive knowledge of collocations.

Teliya et al. (1998) identified culture-related knowledge as another dimension embodied in the issue of lexical competence. They argued that the use of some lexical collocations was restricted by certain cultural stereotypes. Metaphorical collocates, for instance, served as clues to the cultural data associated with the meaning of restricted collocations. Lack of cultural competence might be responsible for learners' failure to acquire such culturally-marked collocations. This was especially true in the case of idioms because their metaphorical meanings were highly connected with cultural connotations and discourse stereotypes.

Idioms represent a unique form of collocation, and several factors affect their comprehension and production. These include the context in which the idioms are situated, the meanings of the constituents of an idiom, and learners' conceptual knowledge of metaphors and figurative competence (Gibbs, 1995; Hamblin & Gibbs, 1999; Levorato, 1993). Idioms are perceived to be more appropriate by native speakers when the context of the idiom is aligned with the intended meaning. Gibbs (1995) argued that for every analyzable idiom its salient part—for example, the main verb—could determine the meaning of the entire idiomatic expression. Based on the outcomes of a series of studies, Hamblin and Gibbs (1999) concluded that learners' figurative competence would also influence their comprehension of idioms.

Strategies in Dealing with Collocations

Due to insufficient knowledge of collocations, English learners may adopt certain strategies to produce collocations and thus create certain types of errors. The strategy used most commonly is transfer in which learners rely on L1 equivalents when they fail to find the desired lexical items in the L2. The Polish subjects in the study by Biskup (1992) mentioned above, for instance, were aware of the significant difference between their L1 and English in terms of linguistic

structure. Hence, their error types reflected an extension of L2 meaning on the basis of L1 equivalents. On the other hand, the group of German learners was inclined to assume formal similarities between their L1 and English. As a result, they made errors such as language switches and blends. The transfer strategy may also reflect the learners' assumption that there is a one-to-one correspondence between their L1 and L2. As Farghal and Obiedat (1995) pointed out, positive transfer occurred when the target collocations matched those in the L1, while negative transfer appeared when no corresponding patterns could be found in the L1.

The second strategy is avoidance (Bahns & Eldaw, 1993; Farghal & Obiedat, 1995; Howarth, 1998). Second language learners may avoid the target lexical items because they fail to retrieve the appropriate items of which they have passive knowledge. As a consequence, they alter the intended meaning of the collocations (Bahns & Eldaw, 1993; Farghal & Obiedat, 1995; Howarth, 1998b).

The third strategy often used by learners is paraphrasing, or using synonyms. Learners may substitute the target item with a synonymous alternative and use paraphrasing to express the target collocations with which they are not familiar. For example, the German learners in Biskup's study (1992) adopted more creative strategies than the Polish learners. They thus provided more descriptive answers such as substituting crack a nut with break a nut open.

Also noteworthy is the study by Farghal and Obiedat (1995), who investigated the use of synonyms by Arabic EFL learners. The study revealed that the subjects' heavy reliance on the open choice principle for item selection led to deviant and incorrect collocations. Additionally, the researchers found that the more collocations learners acquired, the fewer paraphrases they used in their L2 production. In this case, paraphrasing was generally used as an escape-hatch that helped communication proceed.

There are of course other strategies frequently adopted by learners. For example, learners may experiment by creating a collocation that they think is substitutable for the target one (Bahns & Eldaw, 1993; Granger, 1998). Granger (1998) noticed in her corpus of French essays that learners created collocations they considered to be acceptable such as ferociously menacing and shamelessly exploited. Apparently, these unconventional word combinations were a result of learners' creative invention.

Howarth (1998b) examined the errors in the corpus of non-native writers and identified some other strategies including analogies and repetition. These writers created collocations based on a familiar L2 collocation. For instance, they drew an analogy between adopt a method and adopt an approach. However, this strategy might also lead to the overgeneralization of collocability. An example of this would be adopt ways, an idiomatic expression which would likely have marginal usage among non-native speakers. The non-native writers in Granger's (1998) study tended to use a limited number of collocations repeatedly such as

the combination of very with a variety of adjectives. The strategy of repetition was particularly favored when learners did not possess sufficient knowledge of collocations.

Purpose of Study

The preceding review of learners' strategies provides insights concerning how they deal with English collocations. It also provides an understanding of the processes they go through to attain L2 collocations. Some questions naturally arise: To what extent can these strategies be generalized for learners from different L1 backgrounds? What kinds of difficulties do learners from different linguistic backgrounds encounter in dealing with English collocations? The purpose of this research, therefore, was to specifically investigate Chinese EFL learners' knowledge of different types of English collocations. These include free combinations, restricted collocations, figurative idioms, and pure idioms, as proposed by Howarth (1998b).

It was hypothesized that the degrees of difficulty for learners were subject to an items' position in the collocational continuum, starting with free combination as the easiest type and pure idiom the most difficult. In addition, the research investigated critically the errors the learners produced in the target task. An analysis of their responses would reveal their difficulty in acquiring English collocations and uncover the strategies they used to deal with problems. It was expected that an understanding of learners' strategies would shed light on approaches for teaching collocations.

Method

Subjects

Sixty students from a college in southern Taiwan were recruited as the subjects of the study. Of these sixty students, 19 were male and 41 were female, and they ranged from 19 to 22 years of age. Majoring in medical science and technology, these students took English as a mandatory course for the completion of their degree. Before they entered this college, they had received at least six years of English instruction by the time they graduated from high school.

Instruments

The research instrument was a self-designed Simple Completion Test (SCT) that measured the subjects' knowledge in four types of lexical collocations: free combinations, restricted collocations, figurative idioms, and pure idioms (Howarth, 1998b). The test consisted of 40 items in the form of free-response with ten items in each collocational category. Each item contained two or three sentences that provided a context in which a specific collocation or idiom about food or animals was embedded. By referring to the sentential context, a subject

was required to fill in an appropriate word to complete the target collocation or idiom. Most sentences involved in the SCT were adapted from Booker's *Longman active American idioms* (1994).

The 40 test items were distributed to four sections according to their roles as a part of speech. Each section comprised separate test items falling into the four types of collocations previously mentioned. Section A required subjects to fill in an appropriate verb, Section B an adjective, and Section C a noun about food. Target items in Section D were nouns related to animals. Please refer to the Appendix for the complete list of test items. Examples for each type of lexical collocations are given below. (The number in front of each example is its item number in the SCT.)

Free combination - 11. Those boys and girls don't ___ orange juice. They prefer something special, like pineapple juice or punch. (Fill in a verb.)

Restricted collocation - 25. They also provide ___ drinks at the party for those who don't drink alcohol. (Fill in an adjective.)

Figurative idiom - 34. A lazy person always gives the excuse that working is not his cup of ___. (Fill in a noun about food.)

Pure idiom - 47. The Browns bought a very cheap house, but later they spent a lot of money repairing it. We all think that they bought a ___ in a poke. (Fill in a noun about animal.)

Procedure

The SCT was administered in the classroom where regular instruction for the subjects took place. Each subject was allowed sufficient time to work individually on the test questions. It took about 35 minutes for all the subjects to finish the test. Before the test started, the researcher provided directions in Chinese and encouraged the subjects to answer each question or take educated guesses if they were unsure of the answer.

Data Collection and Analysis

The subjects' answer sheets were collected and analyzed using both quantitative and qualitative paradigms. The correct answers provided by each subject were first marked. Special consideration in scoring was given to test words under the categories of free combinations and restricted collocations. An answer that showed a correct choice of lexicon but had wrong inflections was judged to be correct. Note the example below.

> It is possible that after several decades, children may not know how a pig ___. This may happen because they have never seen a pig.

In this case, answers such as *walks, walk, walking* were all counted as correct because the focus of the SCT was on the correct choice of collocates. The response

word *walk* can collocate perfectly with *pig* in this sentence, and thus the inflectional errors in verbs or numbers of nouns were ignored.

The criteria applied to items under the categories of figurative and pure idioms were slightly different. Look at the following example:

> We ___ a whale of time at Paul's birthday party yesterday. It was really fun.

The answers *had, have, has* were all counted as correct. The choice of the verb *to have* was correct for this idiom and the error in verbal inflection did not affect the meaning of the idiom. Accordingly, the above responses were all considered correct. This principle does not apply to the following example.

> Ten years ago, the streets in Chicago were dirty and public services were awful. The city had really gone to the ___. But now it's much better.

In this situation, the word *dogs* was the only correct answer while the alternative word *dog* failed to fit this pure idiom, a type of collation that is completely frozen. No freedom was allowed for a subject to change plurality to singularity in this idiom.

In the quantitative analysis, the number of correct responses for each test word was counted, as were the numbers of blank responses and deviant answers. Descriptive statistics were then generated to compare subjects' performance in each category and observe the relative difficulty of different categories. The mean under each category represented the average number of subjects who answered the test items in the category correctly. The average number of blank responses in each category was also counted because it indicated the difficulty level perceived by the subjects. Since students were encouraged to answer each test item without leaving any blanks, the blank responses may suggest that they were unable to provide even an educated guess due to the difficulty of the item. Another indicator of item difficulty is the number of variations in subjects' incorrect answers. It was suspected that subjects would provide more variations for the items they perceive more challenging.

In addition, a qualitative paradigm was used to analyze the collocational clusters subjects provided for each category. This application aimed to reveal which words caused confusion in terms of their collocability and which lexical collocations were especially challenging to the respondents.

Results

Table 1 displays the average percentage of correct responses for each category. The mean of the free combination category is dramatically higher than that of the other three. The category of pure idioms, as predicted, has the lowest

mean. The mean of figurative idioms is slightly higher than that of restricted collocations, but subjects' performance in the former type is more deviated from the mean. The results have partly confirmed the hypothesis that free combinations appear to be the easiest to deal with, whereas pure idioms are the most challenging. Figurative idioms were expected to be more difficult than restricted collocations. Surprisingly, however, they created the same degree of difficulty for the subjects.

Table 1 Descriptive statistics of the subjects' performance in four categories (N = 60)

	Free combinations	Restricted collocations	Figurative idioms	Pure idioms
Mean	49.20	8.10	8.60	4.0
SD	7.51	7.67	11.08	10.23

The same tendency emerged when the researcher examined the average numbers of subjects' deviant answers (exclusive of the correct answers provided) and blank responses. As shown in Table 2, the subjects gave considerably fewer deviant answers and blank responses for free combinations than in the other three categories. The figures in the categories of restricted collocations and figurative idioms do not show a great difference, indicating that subjects faced an equal level of difficulty for these two categories. Among the four types, pure idioms triggered the most deviant answers and blank responses. Although subjects were encouraged not to skip any items by engaging in guessing, on average approximately one fifth of the subjects failed to provide at least a guess for at least one of the pure idioms.

For restricted collocations and both figurative and pure idioms, the subjects created a large number of variations of incorrect answers. The enormous amount of varieties of deviant answers implies their lack of collocational knowledge.

Table 2 Average numbers of blank responses and variations of incorrect answers in four categories (N = 60)

	Free combinations	Restricted collocations	Figurative idioms	Pure idioms
Blank responses	1.7	7.6	9.7	12.8
Numbers of variations of incorrect answers	7.6	23.3	23.2	26.6

An analysis of subjects' collocational errors in each category suggests that test items created different degrees of difficulty for the subjects. For all test words in free combinations, more than two thirds of the subjects answered correctly except for items 14 *(how a pig ___)* and 22 *(___ food)*. Only 37 out of 60 responded correctly for these two items. For item 14, some subjects provided deviant answers that did not comply with the syntactic structure of the indirect question starting with *how*, e.g., *is, like*. Item 22 required the subjects to fill in an appropriate adjective that collocates with *food*. Many of the deviant answers, however, contained lexical items of other parts of speech and spelling errors. As for the category of restricted collocations, no subjects correctly answered items 19 *(milk their cows)* or 27 *(soup... too thick/solid/stiff to stir)*. Items 18 *(hen...hatch/produce eggs)*, 33 *(food stamps)*, 17 *(make/propose/drink a toast)*, and 25 *(soft/non-alcoholic drinks)* were also very difficult, as fewer than ten subjects responded appropriately.

The subjects had an equally unsatisfactory performance in figurative idioms. None of them could give a correct answer for items 110 *(smell a rat)*, 210 *(a dark horse)*, 211 *(beat a dead horse)* and 45 *(a bull in a china shop)*. By contrast, more than half of the subjects correctly answered item 43 *(a paper tiger)*. Similarly, their performance in item 34 *(his cup of tea)* was also remarkable, with 22 out of 60 subjects providing the correct answer. Pure idioms, as expected, proved to be extremely demanding for the subjects, as none of them managed to provide a correct answer for half of the test items. The other half of the test items with the exception of item 111 *(had a whale of a time)* was also difficult, as only one or two subjects came up with the correct answers. Thirty-three subjects out of 60 provided a correct choice for item 111, though they made a great number of inflectional errors. The reason may be that these subjects made an analogy of this idiom with *have fun* or *have a good time*. Otherwise, they would not be able to answer it correctly because pure idioms are frozen in terms of lexical collocability and meaning fixation. On the other hand, their deviant answers may, to a great extent, also have resulted from guessing. Taking this into account, the researcher did not further analyze their collocational errors in pure idioms.

In comparison with pure idioms, the subjects' deviant answers for restricted collocations and figurative idioms may shed light on their knowledge of collocations since these two categories allow a certain degree of flexibility in lexical combinations. For this reason, a qualitative approach was utilized to analyze the collocational errors the subjects created in these two categories. Table 3 shows the deviant answers for each test item. Only test items involving more than 5 respondents are displayed.

Table 3
Correct and deviant answers for restricted collocations and figurative idioms (N = 60)

Restricted collocations			Figurative idioms		
Item	Correct answer(s)	Deviant answers	Item	Correct answer(s)	Deviant answers
15	take (8) have (2)	eat (34)	110	smell (0)	like (7) have/haven't (7)
16	have (18) produce (1)	are (15) grow/grows /growing/grew (10)	28	big (5)	important (8)
17	make (5)	take (11), go (11)	29	hot (11)	big (6)
18	produce (2) have (5)	get (13)	210	dark (0)	good (8) black (5)
19	milk (0)	take (7)	211	dead (0)	big (9)
24	black (21) strong (0)	red (9)	34	tea (22)	coffee (20)
25	soft (7) non-alcoholic (0)		42	fish (5)	pig (6) dog (6)
26	black (14)	pure (7)	43	tiger (33)	dog (6)
27	thick (0) stiff (0) solid (0)	dry (10) sweet (6)	44	dog (10)	cow (9)
33	food (3)		45	bull (0)	monkey (11) cat (7)

Note: The number in the parentheses indicates the number of subjects who responded to a target item. The deviant answers provided here are incomplete, since only test items involving more than 5 respondents are counted.

The deviant answers provided by the subjects may demonstrate L1 transfer. For example, for item 15 the subjects chose *eat* to collocate with *a bite*, which is a direct translation from Chinese. Other collocations that have L1 equivalents include *trees *grow fruit* (item 16), **red tea* (item 24), **pure coffee* (item 26), *soup... too *dry to stir* (item 27), and **black horse* (item 210) in the case of figurative idioms. The influence of the first language is not always negative. There could be positive transfer that helps the subjects to locate the correct idioms, an example being *a paper tiger* (item 43). This English idiom has a Chinese equivalent that shares exactly the same meaning with its English counterpart. This explains why it is the only test word answered correctly by more than half of the subjects.

For some items, the subjects seemed to fail to recognize the target collocations as somewhat fixed expressions. They then provided a lexical item that did not form a restricted collocation or an idiom with the neighboring words. For example, 20 subjects substituted *tea* with *coffee* in the idiom *one's cup*

of tea (item 34). The other examples were *an *important cheese* instead of *a big cheese* (item 28) and *a *good horse* instead of *a dark horse* (item 210). They also avoided using the target item by adopting another one and thus altered the meaning of the expression. An instance of this would be **take their cows* instead of *milk their cows* (item 19).

When choosing answers for idioms about animals, the subjects tended to activate their cultural stereotypes of the characteristics of certain animals. They employed this strategy when confronted with the puzzle of an unfamiliar collocation. Unfortunately, they quite often ended up with the wrong answers. For instance, *a dog's life* (item 44) means a life of hardship. Subjects who substituted *dog* with *cow* might be inspired by the phrase *work hard* in the preceding sentence. They then made the analogy of the cow, which is associated with the image of a hard-working animal in Chinese culture. For item 45, subjects who chose *a *monkey in a china shop* might think that monkeys tend to fool around and mess up things. When they could not obtain any clue for the answers, they tended to choose high-frequency words. This inclination becomes clear when we notice a certain number of subjects providing the deviant answers of *are, take, go, get, like, have,* and *big*.

Discussion

The purpose of this research was to first investigate Taiwanese EFL students' knowledge of English collocations and then analyze their errors in four categories of collocations. The results indicated that free combinations created the least amount of difficulty, whereas pure idioms were the most challenging. Restricted collocations and figurative idioms were equally difficult for the subjects, who performed only slightly better in these two categories than in the pure idioms category. Most subjects' collocational errors could be attributed to negative transfer from their first language. Also, some subjects chose to adopt the strategies of avoidance and analogy. In some instances, their deviant answers demonstrated the influence of cultural stereotypes and a lack of awareness of collocational restrictions.

Overall, the quantitative results show that these EFL learners have insufficient knowledge of English collocations. In the face of idioms that are frozen in meaning or highly restrictive in the selection of collocates, they have little choice but to give up. These learners' poor performance in restricted collocations lend credence to the viewpoints of Bahns and Eldaw (1993), who assume that learners' collocational knowledge seems not to parallel their competence in vocabulary. Taking this into consideration, many researchers have proposed that restricted collocations is the most important category to teach or learn (Biskup, 1992; Farghal & Obiedat; 1995; Granger, 1998; Howarth, 1998). It is the type of word combination that falls between the two ends of the collocational continuum. It is fair to claim that idioms have a more restricted context for their usage and can be easily avoided since avoidance is a strategy adopted frequently

by learners lacking the passive/active knowledge for a target task. In comparison, restricted collocations are almost unavoidable in L2 learners' speech and writing production. This is also an area that is often neglected because no specific perception problems are posed when learners encounter a new collocation. As Biskup (1992) and Bahns and Eldaw (1993) suggest, learners' understanding of English collocations does not imply satisfactory productive knowledge of collocations nor does their collocational competence progress with the development of their vocabulary knowledge. Therefore, collocations should be explicitly taught with emphases on the restricted type and on learners' productive knowledge.

As shown in the analysis of the error types produced by the subjects, the L1 plays a crucial role in their production of English collocations. The prevalent strategy of transfer reflects learners' assumption that there is a one-to-one correspondence between the L1 and L2. Positive transfer thus occurs when the target collocations match those in the L1. The figurative idiom a paper tiger is one such example. Conversely, negative transfer appears when no corresponding patterns can be found in the L1, such as *eat a bite for take a bite, a *black horse for a dark horse, and *red tea for black tea, just to name a few. Accordingly, when teaching collocations, teachers need to compare and contrast similar collocations in the L1 and L2. It would also be useful to point out the different lexical items used in the parallel collocations in English and learners' L1 by presenting a variety of examples. Learners can thus attend to the lexico-semantic distinctions between the two languages and reduce errors caused by L1 interference.

The learners' tendency to use high-frequency words to substitute for the target lexical items is a significant finding. It reminds us that these learners have scant awareness of collocational restrictions and are also confused by the different collocates these words can take. For example, quite a few subjects substituted make with take or go for the collocation make a toast. About one fourth of the subjects substituted have/produce with be in item 16 (trees ___ fruit). This practice recalls Lennon's 1996 study in which he explored advanced EFL learners' errors in producing some common verbs. Lennon concluded that learners' errors were due to a hazy lexical knowledge in polysemy, collocational restrictions, and phrasal verb combinations. These learners relied too heavily on their ideas of the core meaning of polysemous verbs. When learning the target language, therefore, EFL learners need to explore the meaning-range and collocational restrictions of high-frequency lexical items.

Likewise, Farghal and Obiedat (1995) emphasize teaching vocabulary collocationally instead of individually. In teaching collocations, both intralingual and interlingual approaches need to be addressed. With an intralingual approach, teachers can juxtapose various meanings of a lexical item with different collocates to sensitize learners to the differences. In comparison, an interlingual approach makes use of current corpora of collocations produced by

native English speakers. It functions to attract learners' attention to the native-like usage of collocations.

Another major type of subjects' collocational errors, especially those in producing idioms, is attributed to their lack of cultural awareness. Teliya et al. (1998) propose phraseology as a language of culture since cultural stereotypes are most prominent in the idioms of a language. The Russian collocations on emotions, for example, are connected with local images of nature and hence are culturally marked. The restricted collocation food stamps in the current study is another culturally specific concept that confuses Taiwanese EFL learners unfamiliar with socio-cultural situations in the U.S. Since the meanings of idioms often involve cultural and historical data, teaching idioms through a cultural perspective may foster the processing and retention of L2 idioms. Making comparisons between similar L1 and L2 idioms may also allow learners to associate their mental images of the L1 idiom with the L2 counterpart. They thus have a greater chance to enhance the processing of L2 idioms.

With regard to the acquisition of idioms, Hamblin and Gibbs (1999) propose a method quite different from the traditional ones, which tend to emphasize learning idioms mainly by rote memorization. In a series of experiments they have found that figurative idioms are usually decomposable in such a way that the parts contribute to the overall meaning of the idioms. Even the frozen, non-decomposable pure idioms are, to some degree, analyzable in that their meaning is partly determined by the meaning of the idioms' main verbs. Therefore, learners can acquire L2 idioms by considering the historical origins of words, understanding the cultural stereotypes implied by the idioms, attending to contextual information, and capturing the meaning of the core verb of an idiom.

Conclusions and Educational Implications

This research demonstrated that, due to their insufficient collocational knowledge, the EFL learners in this study performed unsatisfactorily in producing English collocations. In particular, their performance in the type of restricted collocations implies a general unawareness of the semantic range and selectional restrictions of the English lexicon. This problem may spring from their habit of learning English vocabulary as isolated words. Theoretically, learning a new lexicon actually means learning its cultural connotations, semantic fields and collocational restrictions. Only through this can learners promote their phraseological competence to an ideal level for effective communication in written and oral language.

The teaching of collocations inevitably needs to be integrated with the teaching of vocabulary, which can be effectively carried out by both intralingual and interlingual approaches. ESL/EFL teachers need to address the cultural data, metaphorical meanings, and the historical origins associated with the collocations to be introduced. In addition, dictionaries on collocations can foster

the development of collocational competence so long as they provide examples of lexical items with different collocates, indicate different environments associated with a particular collocation, and highlight the subtle distinctions between collocations that appear to be structurally similar.

Some issues are well worth exploring. This study chose collocations related to food and animals based on the assumption that these collocations are easier to learn. Farghal and Obiedat (1995) made a similar observation in their descriptions of frequently used collocations about core topics such as food, colors, and weather. However, the results of the present study have indicated that many factors influence learners' performance. It is premature to determine whether a collocation is easier or more difficult to cope with unless more investigations of a similar nature are conducted. For instance, to get a clear picture of ESL/EFL learners' collocational knowledge in English, more research should target other types of collocation: phrasal verbs, the lexical combinations of adjectives and nouns, or collocations of other topics.

Another issue concerns the contrastive performance of learners from different L1 backgrounds. Biskup (1992) generated some interesting findings by comparing Polish and German L2 learners' collocation errors. In the same vein, it would be useful to explore whether learners from diverse L1 backgrounds encounter different degrees of L1 interference. The need exists for research on how the similarity between English and learners' L1s affects their performance in collocations. We also need more data pertaining to learners' use of collocations in their L1 and English in order to determine how cultural and linguistic background or individual characteristics influence learners' performance. Based on empirical results from studies of this nature, ESL/EFL teachers can adopt more effective methods to enhance learners' lexical competence.

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APPENDIX

List of Target Collocations

The two-digit or three-digit number in front is the item number on the test sheet. A test item having "1" as the first digit is included in Section A, "2" in Section B, "3" in Section C, and "4" in Section D. The second digit represents the order of the test item in its own section. For example, item "210" means the tenth test item in Section B.

Free combinations

11. Those boys and girls don't ___ orange juice. They prefer something special, like pineapple juice or punch. (verb)
12. Tina and her parents don't like lemons because they are too sour. So they ___ apples instead. (verb)
13. Today is Sunday. Do you want to ___ there to see some rare animals? (verb)
14. Is it possible that after several decades, the children may not know how a pig ___? This is because they have never seen a pig.
21. The supermarket often sells ___ fruit, so a lot of people buy fruit there. (adj.)
22. ___ food is more popular in America than in most Asian countries. (adj.)
23. Did you see the ___ rabbit over there? My parents bought it for my birthday. I like it very much. (adj.)
31. Mother is cooking ___ in the kitchen. It smells good. People in the party will surely like it. (food)
32. Please pass the ___ to me. I can't reach it. (food)
41. The little child asked me what a ___ likes to eat. I was not sure, so I looked at the book for information. (animal)

Restricted collocations

15. This peach is sweet and delicious. Would you like to have (take) a bite?
16. Not all trees bear (produce/have) fruit. For example, an apple tree does, but a pine tree doesn't.
17. Let's make (propose/drink) a toast to the host and wish him good health and many years of happiness.
18. If our hen could lay (produce/have) gold eggs like the one in the fairy tale, we would become rich.
19. The farmers milk their cows every morning before breakfast so that their children can have fresh milk to drink.
24. I don't like strong (black) tea because it upsets my stomach. Also, its dark color looks terrible.
25. They also provide soft (non-alcoholic/alcohol-free) drinks at the party for those who don't drink alcohol.

26. Remember to put cream into Jenny's coffee. Otherwise, she'll get angry because she never drinks black (strong) coffee.
27. Please put some more water into the soup, or it will become too thick (stiff/solid) to stir.
33. In the U.S., poor people are given food stamps with which they can get something to eat.

Figurative idioms

110. We don't want to buy the car because its price is so low that we smell a rat. Something must be wrong with the car.
28. Nicole always says that her father is an important person. According to her, he is a big cheese in the government.
29. The earthquake made a lot of people homeless. The housing problem has become such a hot potato that no government officials want to deal with it.
210. Some people say Mr. Tanaka will win the election. Others think Miss McCarty has a chance to win, too. She is sort of a dark horse.
211. When we eat out, Kevin never pays even if it's his turn to do so. We have been beating a dead horse trying to get him to pay the bill.
34. A lazy person always gives the excuse that working is not his cup of tea.
42. He owns the biggest factory in this small town. Though he is well-known in the town, he's just a big fish in a small pond.
43. Mr. Klein seems to have a lot of power in his company, but actually his wife is the real boss. He is just a paper tiger.
44. To become a doctor, you have to work hard at medical school. It's a dog's life because you'll have to study every day for many years.
45. Mother won't let Bill do the dishes because he may break the plates. He's like a bull in a china shop.

Pure idioms

111. We had a whale of a time at Paul's birthday party. It was really fun.
112. In this poor country, many children take small jobs to help their families keep the wolf from the door.
113. Joe went bankrupt. Nobody lent him money because his friends thought he was crying wolf again.
212. Tom isn't going to go to a quit smoking class. He has decided to go cold turkey without any help.
213. My mother spent all day making a cake, but one guest asked her where she had bought it. She really got on her high horse this time.
35. I told all my friends I'd help them with their English, but I got a lot of answers wrong! Now I've got egg on my face.
36. The history teacher is really useless. Many students say that he is not worth his salt and the college should let him go.

46. We got the good news from Helen. Since she is the manager's daughter, we all believed that she got it from the horse's mouth.
47. The Browns bought a very cheap house, but later they spent a lot of money repairing it. We all think that they bought a pig in a poke.
48. Ten years ago, the streets in Chicago were dirty and public services were awful. The city had really gone to the dogs. But now it's much better.